

REMARKS

Reconsideration of this application is respectfully requested.

Claims 39 and 40 have been amended to recite tangible computer-readable media encoded with computer-executable instructions and, as such, are directed to patentable subject matter under 35 USC 101. Support for this amendment is found in the specification as filed, for example at paragraph 34. No new matter was added. These amendments obviate the rejections under 35 USC 101 and are therefore suitable for entry under Rule 116 because the claims are presented in better form for consideration on appeal.

The present claims are patentable over Kikinis, because Kikinis does not describe recognizing one or more patterns in an unmodified broadcast data stream and, prior to broadcasting, automatically inserting interactive triggers based on this recognition in the manners presently claimed.

Kikinis (U.S. Patent 5,929,849) discusses providing TV viewers with a link to supplementary information pertaining to displayed images received at a set-top box. This is accomplished by inserting, on a frame-by-frame basis a URL link within each frame (or in locations between frames) and associating the link with a position of an element within the subject frame. Kikinis, col. 10, ll. 6-11. Inherent in Kikinis is the concept of modifying the broadcast stream.

Consider, for example, the scenario of a prerecorded advertisement as discussed by Kikinis. In such cases, the advertisement is edited off-line (i.e., prior to broadcast) in order to insert desired links, etc. Kikinis at col. 10, ll. 18-55. Thus, this form of URL insertion does not involve recognition of patterns in an unmodified broadcast data stream as claimed. Instead, objects are identified in a non-broadcast data stream.

In the case of live broadcasts, where only minimal delay can be tolerated, in order to associate an object in a frame with a URL the camera and associated data processing equipment must be able to identify the object to be associated with the URL. Kikinis at col. 10, ll. 62-67.

This is done in one of two ways: Either the person or object to be associated with the URL must be equipped with special devices to signal the data processing equipment (Kikinis at col. 11, ll. 2-5), or the object or individual must be bar coded (Kikinis at col. 11, ll. 23-25).

In the former case, transmitting a signal to the data processing equipment does not involve recognizing patterns in an unmodified broadcast data stream. Instead, the technique makes use of external (from the point of view of the broadcast stream) signaling to indicate the need for URL insertion.

In the latter case, recognizing bar coded clothing or objects, the Office Action asserts that this would necessarily involve the use of a pattern engine. However, this is not true. It is well known that bar codes are customarily read by imaging same using a scanner and decoding the resulting reflected light received by a photodetector. Accordingly, because Kikinis is silent as to exactly how the bar code information is read, and because the use of a pattern engine is not inherent in such a system, the present claims are patentable over Kikinis.

The present claims are patentable over Kikinis in view of Portuesi, because neither reference describes recognizing one or more patterns in an unmodified broadcast data stream and prior to broadcasting, automatically inserting interactive triggers based on this recognition, as presently claimed.

Portuesi (U.S. Patent 5,774,666) describes a system and method for displaying an active uniform network resource locator (URL) embedded in a time-based medium. Upon activation of this locator by a user the referenced resource is retrieved and displayed. Portuesi Abstract. However, Portuesi does not teach or suggest use of a pattern engine to recognize patterns in an unmodified broadcast data stream, and consulting a repository storing attributes concerning interactive TV triggers to be inserted into the broadcast data stream is accessed to determine whether a pattern recognized by the pattern engine is to be associated with a one of the interactive TV triggers, as presently claimed.

Instead, in the system described by Portuesi, URLs are embedded in a time-based medium (such as a movie) by explicitly defining in a special URL track when the URLs should

appear and where they should be placed on display. This requires explicitly associating the URLs with audio, image and other elements of a time-based medium using the temporal relationship between the various tracks.¹ Portuesi col. 4, l. 49 – col. 5, l. 12; and col. 5, ll. 20-27 and 40-45.

Thus, in the system described by Portuesi, there is no recognition of patterns in an unmodified broadcast data stream and based on such recognition, automatic insertion of interactive TV triggers, as required by the present claims. Consequently, adding the teachings of Portuesi to those of Kikinis fail to yield the present invention.

For all of the foregoing reasons, the claims are patentable over the references cited in the Office Action. If there are any additional fees due in connection with this communication, please charge our deposit account no. 19-3140.

Respectfully submitted,
SONNENSCHN NATH & ROSENTHAL LLP

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/Tarek N. Fahmi/
Tarek N. Fahmi
Reg. No. 41,402

P.O. Box 061080
Wacker drive Station
Sears Tower
Chicago, IL 60606-1080
650-798-0320

¹ Tables 1-8 (cols. 7-8) in Portuesi further illustrate the explicit definition of, placement and timing of the URL appearance. For enabling a hotspot, shape boundaries (e.g., 2D coordinates) will have to be explicitly defined. Portuesi col. 8, Table 5. Similarly, durations, frame motion association, etc., also have to be explicitly defined. Portuesi col. 7-8, Table 2, 8.